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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/789,557      | 02/27/2004  | C. Brent Dane        | MIC1 1003-2         | 9248             |

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EXAMINER

EVANS, GEOFFREY S

ART UNIT PAPER NUMBER

1725

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/789,557

Applicant(s)

DANE ET AL.

Examiner

Geoffrey S Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8-10, 13, 15-21 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 7, 11, 12 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20040227, 20040607.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Claims 15-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 15-21 are incomplete since no step of laser shock peening is described in the main body of the claim.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1,2,3,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hackel et al. in U.S. Patent No. 5,239,408 in view of Matthews et al. in U.S. Patent No. 5,986,234 and Farmer in U.S. Patent No. 3,724,930. Hackel et al. has as shown in figure 2 a laser system producing an output beam, but does not disclose target delivery optics and does not disclose a relay telescope located between the laser system and

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the target delivery optics. Matthews et al. teaches using target delivery optics (e.g. see figure 6). Farmer teaches using an optical telescope with a baffle (element 11) having a pinhole (element 7) to remove degrading effects caused by dust (e.g. see column 1, lines 10-12). The optical telescopic system disclosed by Farmer will relay an image from one side of the telescope to the other. It would have been obvious to adapt Matthews et al. in view of Farmer to provide this to remove degrading effects caused by dust.

5. Claims 8,9,10,13,15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toller et al. in U.S. Patent No. 6,127,649 in view of Hackel et al. in U.S. Patent No. 5,239,408 and Farmer in U.S. Patent No. 3,724,930. Toller et al. teaches a workpiece robot cell and target delivery optics for laser peening. Toller et al. does not describe the laser system for producing the output beam, nor does Toller et al. disclose a relay telescope. Hackel et al. teaches a high power laser capable of producing pulses with a width of less than 30 nanoseconds and energy greater than 10 joules/pulse. Farmer teaches using an optical telescope with a baffle (element 11) having a pinhole (element 7) to remove degrading effects caused by dust (e.g. see column 1, lines 10-12). It would have been obvious to adapt Toller et al. in view of Hackel et al. and Farmer to provide this to remove degrading effects in the high powered laser caused by dust. The description of the optics

6. Claims 4,5,7,11,12, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 16-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

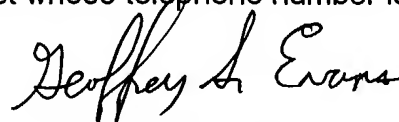
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Emmett in U.S. Patent No. 4,191,928 has a spatial filter in a regenerative amplifier. Sokol in U.S. Patent No. 6,259,055 uses an apodizer to prevent damage to the optical system of a laser peening apparatus. Nakai et al. in U.S. Patent No. 5,670,069 has a spatial filter with a pinhole portion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571)-272-1171. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1300.

GSE



Geoffrey S. Evans  
Primary Examiner  
Group 1700